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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,407

03/17/2004

Mikio Shiraishi

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06/29/2005

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EXAMINER

BLACKMAN, ROCHELLE ANN J

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/803,407	<b>Applicant(s)</b> SHIRAISHI, MIKIO	
	<b>Examiner</b> Rochelle Blackman	<b>Art Unit</b> 2851	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/17/04 & 4/13/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

Claims 1, 6, and 11 are objected to because of the following informalities: claim 1 recites the limitation "the cooling air path" in line 9 of the claim. There is insufficient antecedent basis for this limitation in the claim. Claims 6 and 11 appear to recite the same limitations, with the exception of limitation, "said cooling air is varied" recited in claim 6 and limitation, "said cooling air is selectively varied" recited in claim 11. Applicant is advised to choose one of the above limitations to recite in claims 6 and 11 to maintain consistency in the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi et al. (U.S. Patent Application Publication No. 2002/008852) in view of Shikata et al. (U.S. Patent No. 6,152,699).

Regarding claim 1, Onishi discloses providing a projection type display device (see 101 of FIG. 10 or 106 of FIG. 12), comprising: a light source unit (see 122 of FIGS. 10 or 12; a cooling fan (see 132 of FIG. 10 or 172 of FIG. 12) which cools said light source unit; a light valve (see 123a-c of FIGS. 10 or 12) which modulates a flux of light emanated from said light source unit; and a projection lens (see 121 of FIGS. 10 or 12) which projects light modulated by said light valve; wherein the cooling fan provides a cooling air separated from the light valve to cool only the light source unit (see 103 of FIG. 10 or 171 of FIG. 12).

Regarding claim 2, Onishi discloses a duct (see 133 of FIG. 10 or 173 of FIG. 12) which has said light source unit disposed therein, which duct forms said cooling air path together with the cooling fan (see 103 of FIG. 10 or 171 of FIG. 12).

Regarding claims 1, 3, 4, 8, and 9, Onishi discloses the claimed invention including a cooling fan (see 31 of FIG. 2) disposed at an air inlet (see 11 of FIGS. 2 and 3) which serves as an air flow generating means capable of driving or rotating in forward and reverse directions to selectively generate an intake air flow  $F_a$  and an exhaust air flow  $F_b$  in FIG. 3. However, Onishi does not disclose the cooling air path direction of "cooling fan" 132 or 172 being is "selectively varied" and "changing a direction of

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rotation" of "cooling fan" 132 or 172 between forward and backward" or "varying the rotation" of "cooling fan" 132 or 172.

Shikata teaches providing a cooling fan (see 17 of FIG. 3) disposed in a cooling air path formed by an air outlet aperture or "exhaust" (see 19 of FIG. 3) and an air intake aperture (see 18 of FIG. 3) of an apparatus (see 9 of FIG. 3) comprising heat-generating components, where the cooling air path direction is selectively varied and the direction of rotation of the cooling fan is changed between forward and backward or rotation of the cooling fan is varied (see col. 2, lines 5-11).

It would have been obvious to one of ordinary skill in the art at the time was made to vary the cooling air path direction of "cooling fan" 132 or 172 and/or change the direction of rotation of "cooling fan" 132 or 172 between forward and backward or vary the rotation of "cooling fan" 132 or 172 in the "projection type display device" of the Ohnishi reference, as taught by Shikata for the purpose of blowing off dust that may gather on the air-intake aperture, thus preventing the reduction of the amount of air drawn into the housing, which prevents the heat-generating components from being efficiently cooled (see col. 1, lines 38-40 and col. 2, lines 5-11).

2. Claims 5-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi et al. (U.S. Patent Application Publication No. 2002/008852) in view of Shikata et al. (U.S. Patent No. 6,152,699) as applied to claim 1 above, and further in view of Fuse et al. (U.S. Patent No. 6,280,038).

Onishi and Shikata disclose the claimed invention except for “wherein said cooling fan is provided at substantially a center portion of a casing of said projection type display device”; and “wherein a plurality of cooling fan removal locations are provided in said cooling air path and the direction said cooling air is varied or selectively varied by selecting a specific cooling fan removal location and mounting therein said cooling fan”.

Fuse teaches providing a cooling fan (see 50 of FIG. 8) for cooling a light source (see 1 of FIG. 8) is provided at substantially a center portion of a casing of said projection type display device (see location of 50 in FIG. 8); wherein a plurality of cooling fan removal locations (the plurality of cooling fan removal locations is considered to be the location of 50 in FIG. 8 and the *another place* in col. 8, lines 13-17) are provided in said cooling air path and the direction said cooling air is varied or selectively varied by selecting a specific cooling fan removal location and mounting therein said cooling fan.

It would have been obvious to one ordinary skill in the art at the time the invention was made to provide the cooling fan of the combined Onishi and Shikata reference at substantially a center portion of the casing of the projection type display device and/or providing the cooling air path with a plurality of cooling fan removal portions, as taught by Fuse for the purpose of increasing or decreasing the amount of and/or blowing force of cooling air received by the light source, thus efficiently cooling the light source.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RB

  
JUDY NGUYEN  
REGISTRY PATENT EXAMINER